**Post SA2#148E e-meeting Email Discussion**

**Source: China Mobile, vivo**

**Title: Email discussion on Rel-18 FS\_eNA\_Ph3**

# 1. Work Tasks for Rel-18 FS\_eNA\_Ph3

## 1.1 Importance of Work Tasks

### 1.1.1 Work Tasks Description

The “ Study on Enablers for Network Automation for 5G - phase 3” (FS\_eNA\_Ph3) was approved at SA2#148E e-meeting in S2-2109361, which contains the following Work Tasks and TU estimation.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Work Task ID** | **Work Task Description** | **RAN Dependency**  **(Yes/No/Maybe)** | **TU Estimate**  **(14 + 9 )** | **Inter Work Tasks Dependency** |
| WT#1.1 | whether and how new types of output need to be provided by NWDAF and how would those outputs be defined | NO | 0.5+0.5 | WT#1.1 is self-contained |
| WT#1.2 | Study possible mechanisms for improved correctness of NWDAF analytics | NO | 0.5+0.5 | WT#1.2 is self-contained |
| WT#2.1 | Whether and how NWDAF can assist application detection | NO | 1+0.5 | WT#2.1 is self-contained |
| WT#2.2 | Whether and how to support data and analytics exchange in roaming case (including network sharing) | NO | 1+0.5 | WT#2.2 is self-contained |
| WT#3.1 | data collection and data storage enhancements (including DCCF and ADRF enhancements, e.g., DCCF relocation, ADRF selection, ML model storage) | NO | 0.5+0.5 | WT#3.1 is self-contained |
| WT#3.2 | Whether and how to enhance trained ML Model sharing for different vendors | NO | 1+0.5 | WT#3.2 is self-contained |
| WT#3.3 | UPF data report to NWDAF to support UPF data report for analytics as specified in R16/R17 and additional UPF data identified in R18 | NO | 0.5+0.5 | WT#3.3 is self-contained, but may coordinate with SID FS\_UPCAS |
| WT#3.4 | Study whether and how interactions between NWDAF can leverage MDAS/MDAF functionality for data collection and analytics | NO | 1+0.5 | WT#3.4 is self-contained |
| WT#3.5 | Enhancements related to analytics subscription transfer between NWDAFs (i.e. when analytics are for a group of UEs) | NO | 0.5+0.5 | WT#3.5 is self-contained |
| WT#3.6 | Impact of non-typical situations (e.g. un-scheduled events, disaster) on data collection and analytics | NO | 0.5+0.5 | WT#3.6 is self-contained |
| WT#3.7 | NWDAF-assisted URSP | NO | 1+0.5 | WT#3.7 is self-contained |
| WT#3.8 | enhancements on QoS Sustainability analytics | NO | 1+0.5 | WT#3.8 is self-contained except that “Investigate QoS prediction in Multi-MNO/Cross-border environments” is related with WT#2.2. |
| WT#4.1 | Study whether and how to enhance architecture to support federated learning in the 5GC | NO | 2+1 | WT#4.1 is self-contained |
| WT#4.2 | NWDAF enhancements considering the finer granularity of location information than TA and cell level | NO | 0. 5+0.5 | WT#4.2 is self-contained |
| WT#4.3 | NWDAF enhancements considering inputs from SCP | NO | 0.5+0.5 | WT#4.3 is self-contained |
| WT#4.4 | Study whether and how UE consume data analytics from NWDAF | NO | 1+0.5 | WT#4.4 is self-contained |
| WT#4.5 | Study whether and how to enhance architecture to support online learning in the 5GC | NO | 1+0.5 | WT#4.5 is self-contained |

### 1.1.2 Companies View for the Work Tasks

**Question 1: Whether or not WT#X is essential to be included in Rel-18 FS\_eNA\_Ph3 SID?**

**Please indicate the reason why you think the corresponding WT is not essential in case that Company View is marked as “NO”.**

#### 1.1.2.1 WT#1.1

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
| vivo | Yes | In addition to statistics or predictions, there is a interest to study whether or not to add new outputs, such as recommendations. |
|  |  |  |

#### 1.1.2.2 WT#1.2

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
| vivo | No | Though solutions might improve the accuracy of the output from NWDAFs, this WT is not essential in R18 and could be delayed to future Release. |
|  |  |  |

#### 1.1.2.3 WT#2.1

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
| vivo | Yes | More and more services are delivered in e.g. HTTPS and traditional DPF might work well and there is much interest to investigate how to leverage AI to figure out service characteristic |
|  |  |  |

#### 1.1.2.4 WT#2.2

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
| vivo | No | Roaming architecture should be studied and supported but not essential in R18 and could be delayed to future release. |
|  |  |  |

#### 1.1.2.5 WT#3.1

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
| vivo | Yes | It is essential to futher improve data collection efficiency to decrease the impact on network performance |
|  |  |  |

#### 1.1.2.6 WT#3.2

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
| vivo | Yes | There is much interest to investigate whether and how it is possible to share the ML model across multiple vendors, which is very important to commercialize AI/ML for 5GS, especially considering that UE may be involved in future release. |
|  |  |  |

#### 1.1.2.7 WT#3.3

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
| vivo | Yes | Essential to support standardized UPF data reporting mechanism |
|  |  |  |

#### 1.1.2.8 WT#3.4

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
|  |  |  |
|  |  |  |

#### 1.1.2.9 WT#3.5

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
| vivo | No | Not essential |
|  |  |  |

#### 1.1.2.10 WT#3.6

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
| vivo | No | Not essential for R18 and coud be delayed to future release |
|  |  |  |

#### 1.1.2.11 WT#3.7

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
| vivo | Yes | Beneficial to provide data analytics to PCF to provide smart URSP Rules to UE. |
|  |  |  |

#### 1.1.2.12 WT#3.8

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
| vivo | Yes | Essential enhancements to QoS Sustainability from 5GAA.  In addition, QoS Sustainability analytics is also very useful to UE, powering UE to perform local optimization based on QoS prediction. |
|  |  |  |

#### 1.1.2.13 WT#4.1

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
| vivo | Yes | Due to user privacy and data isolation, it would be good to study how to leverage FL to address the concerns. |
|  |  |  |

#### 1.1.2.14 WT#4.2

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
|  |  |  |
|  |  |  |

#### 1.1.2.15 WT#4.3

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
| vivo | No | Not essential in R18 and could be delayed to future release. |
|  |  |  |

#### 1.1.2.16 WT#4.4

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
| vivo | Yes | In R17 we discussed/agreed how UE report data to NWDAF and in R18 we think it is easily to extend how UE consume data analytics from NWDAF, which will help UE to improve user experience a lot. In addition, this is somehow related to WT#3.8. |
|  |  |  |

#### 1.1.2.17 WT#4.5

|  |  |  |
| --- | --- | --- |
| Company Name | Company View  (Yes/No) | Notes  (View on importance of the particular Work Task and whether this task is required to be included in Rel-18. Provide the rationale and justification for the proposal e.g. deployment scenarios, design choices, etc.) |
| vivo | No | Not essential in R18 and clear use case(s) needed. |
|  |  |  |

### 1.x.3 Summary

Editor’s Note: This clause should contain the brief summary of companies view e.g. n# of companies prefer to go with option A vs. m# of companies prefer to go with option B.

### 1.x.4 Proposed Way Forward

Editor’s Note: This clause should contain propose a way forward. For e.g. Given that majority of companies prefer to go with option A, it is proposed that Option A is agreed as way forward.